

Managing currency risk with passive hedging is often regarded as being risk-free, but this isn't necessarily the case, argues **Ulf Lindahl**, chief investment officer at **AG Bisset & Co**

Time to get active

Local authority pension funds have up to 40pc of their assets invested outside the UK, while corporate schemes also have large international allocations. Unlike the rest of their investment portfolios, the currency risk is not diversified. Typically, around 80pc of the currency exposure is in the dollar, the euro and the yen. Their movements against sterling can, and do, have significant impacts on a portfolio's total return.

Managing the currency risk with a passive hedge is often seen as risk-free since it removes currency returns from investments and the strategy is therefore used by many pension funds to mitigate the currency risk.

It has also become popular to combine passive hedging with a leveraged currency fund to add return. However, passive hedging is not risk-free and "passive + currency fund" strategies have weaknesses in managing the currency risk. Passive hedging has real and large opportunity costs, while paying hedging losses when currencies rise creates delicate cash management issues.

The view that passive hedging is risk-free was reinforced in recent years when the dollar, the euro, and the yen fell against sterling; hedges were profitable and cashflows were positive. However, the currency cycle has now turned up: the euro has risen against sterling since February 2007; the yen has surged since August 2007; and the

dollar has trended up after sterling peaked in November 2007 at \$2.10.

The cycle's upward turn means the risks of a passive hedge have increased – how much cash will be lost to pay hedging losses as currencies rise? And how will the losses impact underlying investments?

Removing risk

Currency managers and consultants often see currency as an unrewarded risk: there is no expected long-term return since currency price changes average near 0pc. It is assumed a loss on a hedge when currencies rise will be recovered when they later decline. If true, passive hedging would painlessly remove currency risk from investments. However, the assumption ignores that currencies move in cycles and currency price changes create currency returns that are a function of underlying asset returns.

Currency price changes and currency returns are not equivalent. To illustrate: if, over the next three years, the US equity market gains 21pc (6.5pc per year) while the dollar gains 35pc against sterling (moves from \$2 to \$1.5), the total return will not be 21pc + 35pc = 56pc, but $100 \times 1.21 \times 1.35 = 1.63$, or +63pc.

A subtraction of the market return reveals the currency return is 42pc, while the dollar rose 35pc. The difference occurs because currency price changes impact an initial



investment and its return. Passive hedging losses can therefore be larger than anticipated.

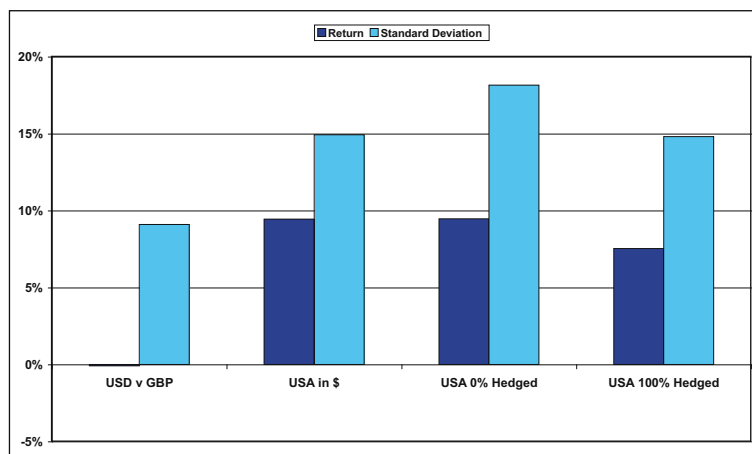
In the almost 20 years from December 1988 through March 2008, price changes in the dollar against sterling annualised at -0.1pc with a standard deviation of 9, while the annualised return of the US equity market (excluding dividends) was +9.4pc (Chart 1).

Measured in sterling, the annualised, unhedged return was +9.5pc or almost the same since the dollar's value did not change much. However, the dollar increased the volatility of the unhedged return. Thus, it appears as if currency has no expected long-term return and is an unrewarded risk. That suggests that passive hedging should be a good currency risk-management strategy. However, had the dollar been fully hedged, the annualised sterling return would have been +7.5pc, or 2pc less per year. Why?

Studies of how hedging impacts investment returns often disregard how hedging losses are funded and the gains invested. The compounding of currency price changes and the effects of cashflows are not captured and result in an incomplete picture of the risks and costs of a passive hedge.

When currencies appreciate and they are fully hedged, the value of underlying investments increases in an investor's base currency, while the hedges have a loss.

Chart 1: Annualised returns and risk



Since hedging losses offset valuation gains, currency returns are removed from the investment. However, the hedging losses must be paid. When currencies rise cyclically, hedging losses cumulate and outflows of cash can be large. The opposite happens when currencies decline; valuation losses are then offset by hedging gains.

If the hedging gains are invested in the underlying assets to offset valuation losses, it is logical that hedging losses are funded by selling underlying assets. The effects are time and portfolio specific, but an example illustrates the high opportunity costs a passive hedge can have over time.

The US equity market's rise since December 1988 is shown in Chart 2 (red line) together with its unhedged return in sterling (blue line) and the dollar's movements against sterling (black line). The sterling return with the dollar hedged is also shown (green line). The hedged return was much lower than the unhedged return.

The hedged return was calculated using quarterly settlements and quarterly rebalancing; hedging losses were funded by selling shares, while gains were used to buy shares to capture the impact cashflows can have on the total return over time.

If £100m was invested in the US stock market in December 1988 and the dollar was hedged as described, the cumulative hedging loss would have reached £120m in 2001 (Chart 3).

As the market rose, the exposure to hedge increased. A 5pc hedging loss at the start equalled £5m but grew to £10m after the market had doubled. When the dollar began to decline in 2002, hedges became profitable, but the cumulative hedging deficit would still have been £44m in March 2008.

Because the dollar and the market rose, an increasing number of shares would have had to be sold to pay the hedging losses, which reached £120m in 2001. Those sales would have caused an investor to own 40pc fewer shares; receive a reduced amount of dividends; and when the bear market of 2000-2002 ended, fewer shares would have participated in the new bull market.

When the dollar began to decline in 2002, hedges became profitable and shares could be bought back. However, an investor would still have had 25pc fewer shares in March 2008. Passive hedging is clearly not risk-free and can have significant long-term costs.

Funding the losses from pension contributions or by selling other assets

Chart 2: Unhedged and hedged US equity market returns

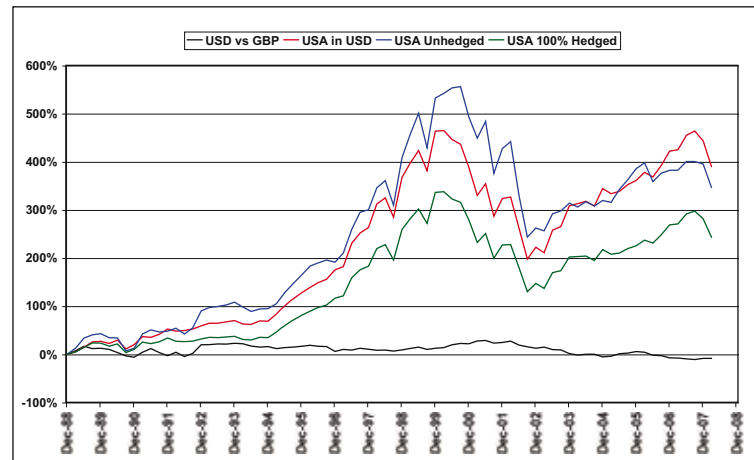


Chart 3: Cumulative cashflow of a passive hedge



merely shifts the costs of the hedging to other areas and creates hard to see and hard to quantify opportunity costs.

What about the future?

To see the potential short-term costs of passively hedging a £100m US equity investment, assume the dollar gains 35pc against sterling over the next three years (sterling drops from \$2 to \$1.50). Because UK interest rates are above US rates (6pc vs 3pc) a passive hedge of the dollar will earn 3pc or £3m per year from the differential, while the dollar's rise will cause a hedging loss of £35m if equities move sideways. If they rise, the hedging loss will be larger.

Since the hedging loss must be paid, the outflow of cash will be £26m. If shares are sold to pay the loss, an investor will have 23pc fewer shares three years hence and will have received fewer dividends. Unfortunately, there is no guarantee that the dollar will return to \$2 in the future to permit future hedging gains

to recoup the cash and shares lost. Since the currency risk in portfolios invested outside the UK is large and the risk needs to be managed, is there a better solution to leaving currencies unmanaged or passively hedged?

Pension consultants agree that currency managers have skill and that active currency hedging programmes can reduce currency losses while permitting participation in gains when currencies rise and they are largely unhedged.

These active strategies can produce superior cashflow profiles and avoid the opportunity costs of a passive hedge. An active overlay can also allow investors to reap a higher long-term return since currency gains are not automatically hedged away. However, because the currency exposure is not diversified and 80pc is normally in the dollar, the euro and the yen, it is critical that two to three overlay managers are employed to dilute the single manager risk.